

**REMARKS**

Claims 1-21 are pending. Claim 1 is amended. Upon entry of the amendment, claims 1-21 will be pending with claims 1, 7 and 14 being independent generic claims. No new matter is added by this amendment. Applicant respectfully requests reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

Applicant submits that no new issues are raised by the claim amendments that need further search and/or consideration. In particular, the amendment to claim 1 is made for clarification, with such subject matter already considered during the examination of independent claims 7 and 14. Applicant submits that the amendments place the application in condition for allowance, or in better form for appeal. The amendments are also made in response to the Examiner's arguments, presented in the present office action.

**35 U.S.C. § 102 Rejection**

Claims 1-3, 7-9, 14-16, and 21 are rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,134,339 issued to Luo, *et al.* ("Luo"). Applicant respectfully traverses this rejection for at least the following reasons.

In the remarks below, Applicant addresses the rejection of each of the independent claims 1, 7 and 14. Claim 1, as amended, recites, in pertinent part:

... means for digitizing said output signal and capturing a first image from said first interval having an illuminator signal portion and an ambient light noise portion and capturing a second image from said second interval having said ambient light noise portion; and

means for subtracting said second image from said first image to produce an output image comprised of said illuminator

signal portion, said output image being devoid of said ambient light noise portion ...

The amendment includes the swapping of the terms “first” and “second” images, to correct an inadvertency, i.e., that it is the second image (viz., the ambient light noise portion) that is being subtracted from the first image (viz., the combination of illuminator signal portion and ambient light noise portion). These features were already considered by the Examiner. Secondly, the term “substantially” has been stricken.

The reason that the resultant image is only “substantially” devoid of ambient light noise is that, as explained in the sentence bridging pages 3 and 4 of Applicant’s specification, “during the inter-frame interval of video cameras (typically 1/30<sup>th</sup> of a second), the level of ambient infrared radiation can be considered nearly constant.” This explanation is repeated in the sentence on page 7, lines 25-28, which follows the observation that the intensity of sunlight and its constituent wavelengths of light, such as infrared radiation, do not vary rapidly. Therefore, to the extent that ambient light is not precisely constant, i.e., to the extent that the ambient light varies, the resultant image produced by Applicant’s invention is “substantially” devoid of ambient light.

Also, in the “Response to Arguments” section of the Office action, on page 2, it is argued that “...the independent claims call for ‘substantially devoid of said ambient light noise portion ....’” This is not true. Independent claims 7 and 14 do not call for “substantially devoid of said ambient light noise portion.” Instead, the ends of both claim 7 and claim 14 recite “subtracting said second data from said first data to produce an output data comprising said reflection portion.” Further, in the amendment above, claim 1 does not call for “substantially devoid of said ambient light portion.” Therefore, to the extent that the rejection is premised upon the

inclusion of a limitation “substantially devoid of said ambient light portion” in the independent claims, Applicant requests withdrawal of the rejection because claims 7 and 14 have never included such limitation and claim 1 has been amended to remove the term “substantially.”

As expressed in independent claim 1, when the second image, characterized as containing the ambient light noise portion, is subtracted from the first image, characterized as containing a combination of said ambient light noise portion and the illuminator signal portion, the resultant “output image” is the illuminator signal portion (i.e., devoid of the ambient light noise portion that had been subtracted out). This feature is not taught by Luo.

Further to the foregoing, page 2 of the Office action also faults Applicant’s argument, presented in his previous reply/amendment, for not reciting in the rejected claims subtracting out “the full value of the ambient IR illumination.” Applicant respectfully disagrees. Where Applicant recites “subtracting said second data from said first data” (the second data having been characterized as the ambient IR illumination), as has been originally recited in claims 7 and 14 (and is still recited) and which is recited in claim 1, as amended, such claims can not fairly be construed as meaning anything else *but* the full value of the second data. There is no basis, either in the literal meaning of the claim limitation or in a logical derivation thereof, for one to construe “subtracting the second data from the first data” to mean “subtracting *some part of* the second data from the first data,” or for one to construe “subtracting the ambient IR illumination” to mean “subtracting *some part of* the ambient IR illumination.”

One does not need to “read into the claims” the aforementioned *full value* of the ambient IR illumination from the specification, inasmuch as the claims do not state that anything less than the full value of the ambient IR illumination is to be subtracted from the combined illuminator

portion and ambient IR portion. As explained in MPEP §2111.01, “Plain Meaning [R-2],” “... the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification.” *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

To the extent that the use of the term “substantially” in original claim 1 was interpreted by the Examiner to support the rejection of claim 1, Applicant respectfully traverses the rejection. The sentence bridging pages 2 and 3 of the Office action states that Applicant’s prior assertion that the “full value of the ambient IR illumination” is understood to result in “a complete devoid of the ambient light noise portion.” That understanding is correct and Applicant respectfully disagrees with the Examiner’s comment that “such feature was never claimed.” Look at independent claims 7 and 14. By subtracting said second data which comprises said noise portion which is the noise portion of the first data, the resultant output data is definitively “devoid” of the noise portion, i.e., it has been subtracted out. To say that the resultant output data is **completely** devoid of the noise portion (which had been subtracted out) would be grammatically redundant. That is, the ordinary meaning of the word “devoid” is “entirely lacking or free from.” *The Oxford American College Dictionary*, G.P. Putnam’s Sons, New York, New York, 2002, page 374. Thus, for one to say that something is “**completely** entirely lacking or free from” something else adds but redundancy to a meaning that would otherwise be understandable.

Finally, with reference to the comments at the top of page 3 of the Office action, and with reference to the comment in paragraph “j” on page 5 of the Office action, that the existence of the term S1 in the numerator of a ratio that is subtracted from S2 (with reference to an excerpt

from Luo's disclosure (column 7, lines 23-39)) can be broadly interpreting as subtracting S1 from S2, Applicant submits that Applicant's claimed invention is not disclosed by Luo. Applicant is reciting that the entirety of the second data from the first data; Applicant is not reciting some other relationship between the two, as the comments in the Office action would imply. Further, as explained above, Applicant is not claiming that the output image is *substantially* devoid of the ambient light noise portion, although the output image would be substantially devoid of ambient light noise (to the extent that the ambient IR illumination might be "nearly" constant (but not precisely constant) between inter-frame intervals at which intervals the first and second images were captured), as explained above.

**CONCLUSION**

For the reasons advanced above, Applicant submits that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicant hereby makes a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to **Deposit Account No. 50-0510**.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Andrew M. Calderon', with a stylized, looping flourish at the end.

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